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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/768,884

01/29/2004

Hitoshi Ueda

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 Fifth Avenue
16TH Floor
NEW YORK, NY 10001-7708

EXAMINER

LE, TUAN H

ART UNIT

PAPER NUMBER

2622

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/768,884	Applicant(s) UEDA, HITOSHI	
	Examiner Tuan H. Le	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12, 14-19 and 21 is/are rejected.
- 7) ☒ Claim(s) 6, 13 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 8, 14, 15, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Michalik (U.S. Pat. 4,519,692).

Regarding **claims 1, 8, and 15**, Michalik discloses an image acquiring device (Michalik, Fig. 1, Fig. 2, Fig. 3) for performing time lapse imaging, comprising:

an imaging portion (camera 26) which performs imaging of a subject;

a time lapse imaging condition setting portion (key board 34) which sets a time lapse imaging condition including at least an exposure time and an imaging interval, prior to the imaging of the subject by the imaging portion, (Michalik, Fig. 2, column 6 lines 1-13 and wherein key combination permits manual entry of image interval (keys 84,86,94) and exposure time (keys 88, 94));

a determining portion (control 40) which determines a contradiction (lapse time runs out and exposure proceeds) of the time lapse imaging condition set by the time lapse imaging condition setting portion according to a predetermined criterion (Michalik, Fig. 3, column 20 lines 46-55, wherein exposure is performed when end of lapse time is reached); and

a presenting portion (display 36) which presents at least information (remaining time) relating to the contradiction of time lapse imaging condition based on a determined result by the determining portion (Michalik, Fig. 3, column 20 lines 46-55, wherein remaining time is displayed).

Regarding **claims 7, 14, 21** Michalik teaches the image acquiring device for performing time lapse imaging according to claim 1. In addition, Michalik teaches the imaging portion includes an imaging portion of a microscopic image acquiring device, (Michalik, Fig. 2, wherein camera portion 26 is associated with a microscope).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 9, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalik (U.S. Pat. 4,519,692) and further in view of Blessinger (U.S. Pat. 5,196,938)

Regarding **claims 2, 9, 16** Michalik teaches the image acquiring device of claim 1,8,15. Michalik does not disclose that the determining portion determines the contradiction of the time lapse imaging condition by using a relation between the exposure time and the imaging interval as the predetermined criterion.

However, Blessinger discloses that the determining portion determines the contradiction of the time lapse imaging condition by using a relation between the exposure time and the imaging interval as the predetermined criterion (Blessinger, FIG. 3E and column 6 lines 1-7, wherein exposure time is greater than imaging interval).

Therefore, it would have been obvious to an artisan to implement the contradiction as described by Blessinger into the image acquiring device as described by Michalik such that user can select an exposure time and imaging interval which are compatible because such implementation eliminates motion blur of a captured frame (Blessinger, column 2 lines 29-30).

Claims 3, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalik (U.S. Pat. 4,519,692) and further in view of Blessinger (U.S. Pat. 5,196,938) and Schinner (U.S. Pub. 2003/0197795)

Regarding **claims 3, 10, 17** Michalik and Blessinger teach the image acquiring device of claim 2, 9, 16. Michalik and Blessinger do not teach

an avoiding condition generating portion which generates a plurality of time lapse imaging conditions for avoiding the contradiction of the time lapse imaging condition based on the determined result by the determining portion, and causes to present information relating to the plurality of time lapse imaging conditions by the presenting portion;

a selecting portion which selects one of time lapse imaging condition from within the information relating to the plurality of time lapse imaging conditions presented by the presenting portion; and

an instructing portion which instructs the imaging portion to execute time lapse imaging based on the time lapse imaging condition selected by the selecting portion.

However, Schinner discloses

an avoiding condition generating portion (microprocessor 36) which generates a plurality of time lapse imaging conditions for avoiding the contradiction of the time lapse imaging condition based on the determined result by the determining portion, and causes to present information relating to the plurality of time lapse imaging conditions by the presenting portion (LCD 46), (Schinner, Fig. 1 and paragraph [0040], wherein manual and automatic gain control is performed);

a selecting portion (inherent part) which selects one of time lapse imaging condition from within the information relating to the plurality of time lapse imaging conditions presented by the presenting portion (Schinner, Fig. 1 and paragraph [0040], wherein the digital camera prompts user to either manually or automatically control gain)

an instructing portion (capture 34) which instructs the imaging portion to execute time lapse imaging based on the time lapse imaging condition selected by the selecting portion (Schinner, Fig. 1, wherein capture 34 is used to capture images).

Therefore, it would have been obvious to an artisan to combine the avoiding condition generating portion, the selecting portion, and the instructing portion as described by Schinner with the image acquiring device as described by Michalik and Blessinger such that user can select one of time lapse imaging condition for image

capturing because such combination balances the conflicting needs of stopping subject motion and capturing sufficient light for an appropriately bright image.

Regarding **claims 4, 11, 18**, Michalik, Blessinger, and Schinner teach the image acquiring device of claim 3, 10, 17. In addition, Michalik discloses

an exposure time setting portion (control 40) which sets the exposure time set by the time lapse imaging condition setting portion to the imaging portion, (Michalik, Fig. 3, wherein entered exposure time is used for image capturing); and

Schinner discloses

a gain setting portion (52,60,62) which enables setting of gain of an output signal from the imaging portion, wherein, when the determining portion determines the contradiction of the time lapse imaging condition in which the exposure time is longer than the imaging interval, the avoiding condition generating portion changes a set value of the exposure time by the exposure time setting portion to an exposure time shorter than the imaging interval, and sets a value of the gain set by the gain setting portion based on a value determined from a ratio of the exposure time after change and the imaging interval, (Schinner, Fig. 2, Fig. 3, wherein when exposure time is too long, image signal is amplified based on the ratio of exposure time).

Regarding **claims 5, 12, 19**, Michalik, Blessinger, and Schinner teach the image acquiring device of claim 3, 10, 17. In addition, Michalik discloses

an exposure time setting portion (control 40) which sets the exposure time set by the time lapse imaging condition setting portion to the imaging portion, (Michalik, Fig. 3, wherein entered exposure time is used for image capturing); and

Schinner discloses

a brightness correcting portion (52,60,62) which enables correction of brightness of an image by an output signal from the imaging portion, wherein, when the determining portion determines the contradiction of the time lapse imaging condition in which the exposure time is longer than the imaging interval, the avoiding condition generating portion changes a set value of the exposure time by the exposure time setting portion to an exposure time shorter than the imaging interval, and sets a value for correcting the brightness of the image by the brightness correcting portion based on a value determined from a ratio of the exposure time after change and the imaging interval, (Schinner, Fig. 2, Fig. 3, wherein when exposure time is too long, image signal is amplified based on the ratio of exposure time).

Allowable Subject Matter

Claims 6,13, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record neither anticipated nor rendered obvious the reset of exposure time in accordance with imaging time and use it in a ratio for gain control and thereafter brightness control. The closest prior art uses the reset exposure time in a ratio of gain control.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aizaki et al (U.S. Pub. 2003/0016301) discloses a microscope system in which an electronic camera is used to pickup an observation image by a microscope.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Le whose telephone number is (571) 270-1130. The examiner can normally be reached on M-Th 7:30-5:00 F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan Le/
7/23/07

A handwritten signature in black ink, appearing to read 'David Ometz', with a long horizontal flourish extending to the right.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER